A TABLE of the Eclipſes of *Jupiter's* Four Planets; with another Table of the *Immerſions* and *Emerſions* of the Firſt Planet into, and from *Jupiter's* Body; and the *Parallax* of the *Orb*: For the Years 1739 and 1740.

Eclipſes, of the 1ſt. Planet.

51.e.19

1739

EMERSIONS.

January.

D.	H.	M.	S.
2	7	44	40
4	2	12	55
5	20	41	10
7	15	9	24
9	9	36	50
11	4	5	16
12	22	34	41
14	17	3	14
16	11	31	47
18	6	0	20
20	0	29	0
21	18	57	40
23	13	26	19
25	7	55	12
27	2	24	25
28	20	52	57
30	15	21	52

February.

1	9	50	47
3	4	19	40
4	22	48	40
6	17	17	30
8	11	46	42
10	6	15	44
12	0	44	48
13	19	13	58
15	13	43	29
17	8	12	20
19	2	41	32
20	21	10	48
22	15	40	6
24	10	9	28
26	4	38	47
27	23	8	6

1739

EMERSIONS.

March.

D.	H.	M.	S.
1	17	37	23
3	12	6	43
5	6	36	3
7	1	5	22
8	19	34	44
10	14	4	6
12	8	33	28
14	3	2	4
15	21	30	40
17	16	1	32
19	10	30	52
21	5	0	12

Jupiter near the Sun.

IMMERSIONS.

May.

7	21	55	37
9	16	24	13
11	10	52	49
13	5	21	26
14	23	49	52
16	18	18	16
18	12	46	41
20	7	14	53
22	1	43	5
23	20	11	41
25	14	40	0
27	9	8	15
29	3	36	33
30	22	4	51

June.

1	16	33	9
3	11	1	26
5	5	29	34
6	23	57	42
8	13	25	49

1739

IMMERSIONS

June.

D.	H.	M.	S.
10	12	53	53
12	7	21	57
14	1	50	22
15	20	18	37
17	14	46	52
19	9	15	7
21	3	43	11
22	22	11	35
24	16	39	49
26	11	8	1
28	5	36	13
30	0	4	26

July.

1	18	32	29
3	13	0	57
5	7	29	49
7	1	57	52
8	20	25	54
10	14	54	29
12	9	23	40
14	3	51	12
15	22	19	43
17	16	48	9
19	11	16	47
21	5	45	8
23	0	13	30
24	18	42	22
26	13	11	6
28	7	39	50
30	2	8	36

Auguſt.

0	20	37	12
2	15	6	6
4	9	34	5
6	4	3	26

1739

IMMERSIONS.

Auguſt.

D.	H.	M.	S.
7	22	32	18
9	17	1	10
11	11	30	2
13	5	58	58
15	0	27	54
16	18	57	3
18	13	25	57
20	7	54	15
22	2	23	44
23	20	52	47
25	15	21	50
27	9	50	52
29	4	19	55
30	22	48	58

September.

1	17	13	11
3	11	47	6
5	6	16	1
7	0	45	18
8	19	14	22
10	13	43	26
12	8	12	28
14	2	41	29
15	21	10	30
17	15	39	31
19	10	8	36
21	4	37	41
22	23	6	46
24	17	35	40
26	12	5	21
28	6	33	21
30	1	2	18

October.

1	19	31	36
3	14	0	12
5	8	29	7
7	2	58	59

1739.

IMMERSIONS.

October.

D.	H.	M.	S.
8	21	27	4
10	15	55	47
12	10	24	24
14	4	52	12
15	23	22	32
17	17	50	44
19	12	19	19
21	6	47	55
23	1	16	31
24	19	45	9
26	14	13	45
28	8	42	14
30	3	10	22

November.

0	21	39	12
2	16	7	31
4	10	35	33
6	5	4	9
7	23	32	45
9	18	0	19
11	12	28	55

Jupiter in Oppoſition to the Sun.

EMERSIONS

11	14	36	56
13	9	5	32
15	3	34	8
16	22	2	12
18	16	30	16
20	10	58	19
22	5	26	16
23	23	54	13
25	18	22	13
27	12	50	5
29	7	17	21

1739.

EMERSIONS.

December.

D.	H.	M.	S.
1	1	46	3
2	20	14	2
4	14	42	1
6	9	9	59
8	3	37	52
9	22	5	45
11	16	33	37
13	11	1	29
15	5	29	25
16	23	57	19
18	18	25	20
20	12	53	21
22	7	21	36
24	1	49	45
25	20	17	54
27	14	46	3
29	9	14	19
31	3	42	35

1740.

EMERSIONS.

January.

1	22	10	28
3	16	38	49
5	11	7	10
7	5	35	31
9	0	3	54
10	18	32	17
12	13	0	40
14	7	29	3
16	1	57	26
17	20	26	9
19	14	54	44
21	9	23	19
23	3	51	54
24	22	20	47
26	16	49	40
28	11	18	32
30	5	47	28

1740

EMERSIONS.

February

D.	H.	M.	S.
1	0	16	10
2	18	45	9
4	13	14	10
6	7	43	9
8	2	12	15
9	20	41	21
11	15	10	27
13	9	39	36
15	4	8	45
16	22	37	57
18	17	7	13
20	11	36	29
22	6	5	44
24	0	35	3
25	19	4	22
27	13	33	40
29	8	3	6

March

2	2	32	32
3	21	2	2
5	15	31	25
7	10	0	47
9	4	30	12
10	22	59	34
12	17	28	56
14	11	58	19
16	6	27	38
18	0	56	54
19	19	26	35
21	13	56	1
23	8	25	27
25	2	54	52
26	21	24	11
28	15	53	30
30	10	22	50

April.

1	4	52	7
2	23	21	24

1740.

EMERSIONS.

April.

D.	H.	M.	S.
4	17	50	42
6	12	19	54
8	6	49	6
10	1	18	19
11	19	47	27
13	14	16	33
15	8	45	37
17	3	14	41
18	21	43	44
20	16	12	41
22	10	41	38
24	5	10	36
25	23	39	29
27	18	8	22
29	12	37	14

May.

1	7	6	30
3	1	34	55
4	20	3	36
6	14	32	17
8	9	0	59
10	3	29	35
11	21	58	11

Jupiter near the Sun.

IMMERSIONS.

June.

19	18	9	44
21	12	38	1
23	7	6	18
25	1	34	37
26	20	2	50
28	14	31	5
30	8	59	19

1740.

IMMERSIONS.

July.

D.	H.	M.	S.
2	3	27	30
3	21	55	41
5	16	24	23
7	10	52	48
9	5	21	13
10	23	49	37
12	18	18	8
14	12	46	39
16	7	15	11
18	1	43	41
19	20	12	11
21	14	40	43
23	9	9	17
25	3	37	51
26	22	6	37
28	16	35	20
30	11	4	3

Auguſt.

1	5	32	46
3	0	1	28
4	18	30	16
6	12	59	5
8	7	27	56
0	1	56	47
1	20	25	38
3	14	54	32
5	9	23	32
7	3	52	26
8	22	21	26
0	16	50	26
2	11	19	14
4	5	48	16
6	0	17	32
7	18	46	3
9	13	15	5
1	7	44	7

1740.

IMMERSIONS.

September.

D.	H.	M.	S.
2	2	13	10
3	20	42	9
5	15	10	58
7	9	40	8
9	4	9	8
10	22	38	8
12	17	7	10
14	11	36	7
16	6	5	4
18	0	34	3
19	19	3	0
21	13	31	57
23	8	0	53
25	2	30	4
26	20	58	55
28	15	27	26
30	9	56	14

October.

2	4	25	2
3	22	53	50
5	17	22	31
7	11	51	12
9	6	19	54
11	0	48	33
12	19	17	12
14	13	45	50
16	8	14	21
18	2	42	52
19	21	11	22
21	15	39	45
23	10	8	6
25	4	36	31
26	23	4	48
28	17	33	5
30	12	1	21

November.

1	6	29	29
3	0	57	37

1740.

IMMERSIONS.

November.

D.	H.	M.	S.
4	19	25	46
6	13	53	52
8	8	21	58
10	2	50	5
11	21	17	59
13	15	45	53
15	10	13	47
17	4	41	39
18	23	9	29
20	17	37	22
22	12	5	27
24	6	33	32
26	1	0	35
27	19	28	26
29	13	56	17

December.

1	8	24	6
3	2	51	45
4	21	19	24
6	15	47	2
8	10	14	41
10	4	42	20
11	23	9	56
13	17	37	42
15	12	5	28

Jupiter in Oppoſition to the Sun.

EMERSIONS.

15	14	19	38
17	8	47	25
19	3	15	13
20	21	43	1
22	16	10	52
24	10	38	45
26	5	6	38
27	23	34	30

1740.

EMERSIONS.

December.

D.	H.	M.	S.
29	18	2	26
31	12	30	22

Eclipſes of the 2d. Planet.

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EMERSIONS.

D.	H.	M.	S.
January.			
2	15	17	23
6	4	35	36
9	17	53	30
13	7	9	50
16	20	28	7
20	9	46	25
23	23	4	49
27	12	23	12
31	1	42	27
February.			
3	15	0	43
7	4	19	40
10	17	38	38
14	6	57	10
17	20	16	32
21	9	36	15
24	22	55	56
28	12	15	30
March.			
4	1	35	5
7	14	54	41
11	4	14	18
14	17	13	51
18	6	53	25
21	20	13	2
IMMERSIONS.			
May.			
6	22	47	18
10	12	5	12
14	1	23	10

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IMMERSIONS.

D.	H.	M.	S.
May.			
17	14	40	54
21	3	58	37
24	17	16	6
28	6	33	34
June.			
0	19	50	55
4	9	8	16
7	22	25	29
11	11	42	42
14	23	59	55
18	14	17	7
22	3	33	55
25	16	51	42
29	6	9	4
July.			
2	19	26	26
6	8	43	59
9	22	1	27
13	11	19	14
17	0	37	0
20	13	54	53
24	3	12	49
27	16	30	46
31	5	48	44
Auguſt.			
3	19	7	21
7	8	25	58
10	21	44	32
14	11	3	7
18	0	21	22
21	13	40	37
25	2	59	30
28	16	18	21

1739

IMMERSIONS.

D.	H.	M.	S.
September.			
1	5	37	25
4	18	56	29
8	8	15	22
11	21	34	13
15	10	53	8
19	0	12	5
22	13	31	0
26	2	49	55
29	16	8	37
October.			
3	5	27	19
6	18	45	50
10	8	4	21
13	21	22	35
17	10	40	48
20	23	58	51
24	13	16	64
28	2	34	39
November.			
0	15	52	24
4	5	9	58
7	18	27	33
11	7	44	37
EMERSIONS.			
14	23	36	55
18	12	53	54
22	2	10	52
25	15	27	43
29	4	44	34
December.			
2	18	1	15
6	7	17	56
9	20	34	39

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EMERSIONS.

D.	H.	M.	S.
December.			
13	9	51	21
16	23	8	10
20	12	24	58
24	1	41	52
27	14	58	45
31	4	15	44

1740:

EMERSIONS.

January.			
3	17	33	39
7	6	51	25
10	20	8	40
14	9	26	26
17	22	44	12
21	12	2	20
25	1	19	56
28	14	39	6
February.			
1	3	57	
4	17	16	
8	6	35	
11	19	54	
15	9	13	
18	22	33	
22	11	52	
26	1	12	
March.			
0	14	31	
4	3	51	
7	17	10	

1740

EMERSIONS.

March.

D.	H.	M	S.
11	6	30	28
14	19	50	10
18	9	9	52
21	22	29	30
25	11	49	17
29	1	8	36

April.

D.	H.	M	S.
1	14	28	4
5	3	47	25
8	17	6	45
12	6	25	50
15	19	44	54
19	9	3	46
22	22	22	36
26	11	41	6
30	0	59	35

May.

D.	H.	M	S.
3	14	18	3
7	3	36	30
10	16	54	44

Jupiter is near his Conjunction with the Sun till *June* 22.

1740

IMMERSIONS.

June.

D.	H.	M.	S.
22	5	42	29
25	19	0	23
29	8	18	17

July.

D.	H.	M.	S.
2	21	34	20
6	10	51	19
10	0	9	16
13	13	26	50
17	2	44	40
20	16	2	34
24	5	20	24
27	18	38	31
31	7	56	37

Auguſt.

D.	H.	M.	S.
3	21	14	56
7	10	33	15
10	23	51	40
14	13	10	5
18	2	29	8
21	15	47	20
25	5	5	56
28	18	24	32

1740

IMMERSIONS.

September.

D	H.	M	S.
1	7	43	20
4	21	2	6
8	10	20	52
11	23	39	37
15	12	58	16
19	2	16	53
22	15	35	22
26	4	53	50
29	18	12	48

October.

D	H.	M	S.
3	7	31	43
6	20	49	16
10	10	6	48
13	23	24	42
17	12	42	35
21	2	0	29
24	15	18	23
28	3	35	7

November.

D	H.	M	S.
0	17	52	24
4	7	9	10
7	20	26	0
11	9	42	47

1740

IMMERSIONS.

November.

D.	H.	M.	S.
14	22	59	12
18	12	15	37
22	1	32	13
25	14	48	47
29	4	4	37

December.

D.	H.	M.	S.
2	17	20	25
6	6	36	27
9	19	52	30
13	9	8	40
16	22	24	43
17	1	12	21

EMERSIONS.

D.	H.	M.	S.
20	14	28	15
24	3	45	6
27	17	1	30
31	6	18	54

Eclipſes of the 3d. Planet.

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IMMERSIONS. AND EMERSIONS.

January.

	D.	H.	M	S.
Im.	1	9	11	55
Em.	1	11	23	25
Im.	8	13	11	52
Em.	8	15	23	8
Im.	15	17	12	46
Em.	15	19	23	54
Im.	22	21	13	22
Em.	22	23	24	10
Im.	30	1	15	34
Em.	30	3	26	16

February.

	D.	H.	M	S.
Im.	6	5	17	35
Em.	6	7	28	1
Im.	13	9	20	44
Em.	13	11	31	7
Im.	20	13	23	46
Em.	20	15	33	58
Im.	27	17	27	31
Em.	27	19	37	41

March

	D.	H.	M	S.
Im.	6	21	31	20
Em.	6	23	41	24
Im.	14	1	35	7
Em.	14	3	45	7
Im.	21	5	38	55
Em.	21	7	48	57
Im.	28	9	41	33
Em.	28	11	50	52

Jupiter is near his Conjunction with the Sun till *May* 10.

IMMERSIONS AND EMERSIONS.

May.

	D.	H.	M.	S.
Im.	10	9	59	33
Em.	10	12	10	27
Im.	17	13	57	9
Em.	17	16	8	23
Im.	24	17	54	45
Em.	24	20	6	8

June.

Im.	0	21	54	6
Em.	1	0	5	54
Im.	8	1	53	12
Em.	8	4	5	20
Im.	15	5	51	37
Em.	15	8	4	7
Im.	22	9	50	55
Em.	22	12	3	18
Im.	29	13	49	28
Em,	29	16	2	42

July.

Im.	6	17	49	19
Em.	6	20	2	44
Im.	13	21	48	23
Em.	14	0	2	23
Im.	21	1	49	11
Em.	21	4	3	26
Im.	28	5	48	48
Em.	28	8	3	58

August.

Im.	4	9	50	29
Em.	4	12	5	52
Im.	11	13	50	57
Em.	11	16	7	13
Im.	18	17	52	58
Em.	18	20	9	38
Im.	25	21	53	51
Em.	26	0	11	15

September.

	D.	H.	M.	S.
Im.	2	1	56	59
Em.	2	4	14	41
Im.	9	5	58	54
Em.	9	8	17	32
Im.	16	10	1	44
Em.	16	12	20	43
Im.	23	14	3	1
Em.	23	16	23	17

October.

Im.	0	18	5	2
Em.	0	20	25	34
Im.	7	22	5	59
Em.	8	0	27	19
Im.	15	2	7	16
Em.	15	4	28	57
Im.	22	6	7	8
Em.	28	8	29	54
Im.	29	10	7	21
Em.	29	12	30	37

November.

Im.	5	14	6	8
Em.	5	16	30	22
Im.	12	18	5	7
Em.	12	20	29	21
Im.	19	22	2	28
Em.	20	0	28	20
Im.	27	2	0	30
Em.	27	4	26	46

December.

Im.	4	5	57	43
Em.	4	8	25	13
Im.	11	9	55	19
Em.	11	12	23	9
Im.	18	13	53	40
Em,	18	16	22	46
Im.	25	17	55	4
Em.	25	20	20	32

January.

	D.	H.	M.	S.
Im.	1	21	47	58
Em.	2	0	18	38
Im.	9	1	45	44
Em.	9	4	17	24
Im.	16	5	45	57
Em.	16	8	18	37
Im.	23	9	47	9
Em.	23	12	19	49
Im.	30	13	46	36
Em.	30	16	20	56

February

Im.	6	17	48	20
Em.	6	20	23	36
Im.	13	21	50	2
Em.	14	0	26	16
Im.	21	1	52	41
Em.	21	4	29	47
Im.	28	5	55	18
Em.	28	8	33	18

March.

Im.	6	9	56	13
Em.	6	12	37	11
Im.	13	14	1	10
Em.	13	16	41	4
Im.	20	18	4	4
Em.	20	20	44	57
Im.	27	22	7	1
Em.	28	0	48	39

April.

Im.	4	2	9	29
Em.	4	4	52	7
Im.	11	6	12	0
Em.	11	8	55	36
Im.	18	10	14	38
Em.	18	12	58	15
Im.	25	14	17	18
Em.	25	16	58	54

May.

	D.	H.	M.	S.
Im.	2	18	20	30
Em.	2	20	58	30
Im.	9	22	24	30
Em.	10	0	58	6

June.

Im.	21	22	8	18
Em.	22	0	59	6
Im.	29	2	6	52
Em.	29	5	0	52

July.

Im.	6	6	3	26
Em.	6	8	58	2
Im.	13	10	2	27
Em.	13	12	58	57
Im.	20	14	1	28
Em.	20	16	58	4
Im.	27	18	0	25
Em.	27	20	57	55

August.

Im.	3	22	1	23
Em.	4	0	59	47
Im.	11	2	2	17
Em.	11	5	1	33
Im.	18	6	3	11
Em.	18	9	3	19
Im.	25	10	4	
Em.	25	13	5	7

September.

Im.	1	14	4	56
Em.	1	17	6	44
Im.	8	18	6	
Em.	8	21	8	5
Im.	15	22	7	4
Em.	16	1	11	0
Im.	23	2	7	37
Em.	23	5	12	15
Im.	30	6	8	10
Em.	30	9	13	3

IMMERSIONS. AND EMERSIONS.

October.

	D.	H.	M.	S.
Im.	7	10	8	20
Em.	7	13	14	30
Im.	14	14	8	30
Em.	14	17	15	30
Im.	21	18	9	6

October.

	D.	H.	M.	S.
Em.	21	21	17	6
Im.	28	22	5	40
Em.	29	1	14	38
November.				
Im.	5	2	3	10
Em.	5	5	12	46
Im.	12	6	0	39
Em.	12	9	10	53

November.

	D.	H.	M.	S.
Im.	19	9	57	15
Em.	19	13	8	11
Im.	26	13	53	17
Em.	26	17	4	57
December.				
Im.	3	17	49	3
Em.	3	21	1	33
Im.	10	21	44	49

December.

	D.	H.	M.	S.
Em.	11	0	58	9
Im.	18	1	41	33
Em.	18	4	54	53
Im.	25	5	36	51
Em.	25	8	51	37

Heliocentrick Oppoſitions, and *Eclipſes* of the 4th Planet.

1739

Heliocentrick Oppoſitions.

January.

D.	H.	M.	S.
5	2	48	50
21	21	2	14
February.			
7	15	18	43
24	9	37	56
March.			
13	3	58	44
- - - - - -			
- - - - - -			
May.			
19	5	6	40
June.			
4	23	16	54
21	17	25	41
July.			
8	11	34	7
25	5	46	40

Heliocentrick Oppoſitions.

Auguſt.

D.	H.	M.	S.
11	0	0	33
28	18	16	33
September.			
13	12	32	28
30	6	48	13
October.			
17	1	1	38
November.			
2	19	2	16
19	13	19	29
December.			
6	7	24	28
23	1	28	56
1740			
January.			
8	19	35	35
25	12	44	50

Heliocentrick Oppoſitions.

February.

D.	H.	M.	S.
11	6	58	47
28	2	18	59
March.			
15	20	31	54
April.			
1	13	48	26
18	8	45	57
May.			
5	3	14	24

Jupiter is near his Conjunction with the Sun till June 24.

Eclipſes of the 4th.

IMMERSIONS. AND EMERSIONS.

June.

	D.	H.	M.	S.
Im.	24	8	47	33
Em.	24	10	18	35

IMMERSIONS. AND EMERSIONS.

July.

	D.	H.	M.	S.
Im.	11	2	44	31
Em.	11	4	32	29
Im.	27	20	44	58
Em.	27	22	47	18
Auguſt.				
Im.	13	14	47	22
Em.	13	17	2	12
Im.	30	8	53	15
Em.	30	11	19	41
September.				
Im.	16	2	59	52
Em.	16	5	34	56
October.				
Im.	2	20	56	3
Em.	2	23	44	5
Im.	19	15	5	43
Em.	19	18	2	13
November.				
Im.	5	9	4	53
Em.	5	12	10	11

IMMERSIONS. AND EMERSIONS. November.	D.	H.	M.	S.
Im.	22	2	41	31
Em.	22	5	55	3

IMMERSIONS. AND EMERSIONS. December.	D.	H.	M.	S.
Im.	8	20	54	11
Em.	8	24	15	23

IMMERSIONS. AND EMERSIONS. December.	D.	H.	M.	S.
Im.	25	14	48	19
Em.	25	18	16	49

A TABLE of the *Occultations*, the *Immerſions* and *Emerſions* of Jupiter's 1ſt. Planet into, and from Jupiter's Body: with the *Parallax of the Orb*, for every Day of the Years 1739, and 1740, while Jupiter is viſible.

Days of *January.*	*Parallax* of the Orb.	1739
		H. M. H. M. H M.
1	11 22	*Im.* 6 59. *Em.* 9 13.
2	11 23	*Im.* 4. 13. Eclipſe.
3	11 23	*Im.* 1 27. *Em.* 3 41. *Im.* 22 41.
4	11 24	Eclipſe, *Im.* 19 56. *Em.* 22 10.
5	11 24	*Im.* 17 10 Eclipſe.
6	11 23	*Im.* 14 24. *Em.* 16 38.
7	11 22	*Im.* 11 38. Eclipſe.
8	11 21	*Im.* 8 52. *Em.* 11 6.
9	11 19	*Im.* 6 6 Eclipſe.
10	11 18	*Im.* 3 20. *Em.* 5 34.
11	11 17	*Im.* 0 34 Eclipſe. *Im.* 21 49.
12	11 15	*Em.* 0 3. *Im.* 19 4 Eclipſe.
13	11 13	*Im.* 16 18 *Em.* 18 33.
14	11 10	*Im.* 13 33 Eclipſe.
15	11 7	*Im.* 10 48 *Em.* 13 2.
16	11 5	*Im.* 8 3 Eclipſe.
17	11 2	*Im.* 5 17 *Em.* 7 31.
18	11 0	*Im.* 2 31 Eclipſe *Im.* 23 46.
19	10 58	*Em.* 2 0. *Im.* 21 1.
20	10 55	Eclipſe *Im.* 18 15 *Em.* 20 29.
21	10 52	*Im.* 15 30 Eclipſe.
22	10 48	*Im.* 12 44 *Em.* 14 58.
23	10 46	*Im.* 9 59 Eclipſe.
24	10 42	*Im.* 7 14 *Em.* 9 28.
25	10 39	*Im.* 3 29 Eclipſe.
26	10 35	*Im.* 1 43 *Em.* 3 57 *Im.* 22 59.
27	10 32	Eclipſe *Im.* 20 13 *Em.* 22 27.
28	10 28	*Im*, 17 28 Eclipſe.
29	10 23	*Im.* 14 42 *Em.* 16 56.
30	10 18	*Im.* 11 58 Eclipſe.
31	10 13	*Im.* 9 12 *Em.* 11 26.

Days of *February.*	*Parallax* of the Orb.	1739
		H. M. H. M. H. M.
1	10 9	Im. 6 28 Eclipſe.
2	10 4	Im. 3 42. Em. 5 56
3	9 59	Im. 0 59 Eclipſe, Im 22 12
4	9 55	Em. 0 26 Im. 19 28 Eclipſe,
5	9 50	Im. 16 42 Em. 18 56
6	9 44	Im. 13 57 Eclipſe
7	9 38	Im. 11 12 Em. 13 26
8	9 32	Im. 8 28 Eclipſe
9	9 26	Im. 5 43 Em. 7 57
10	9 20	Im. 2 59 Eclipſe
11	9 15	Im. 0 13 Em. 2 27 Im. 21 29
12	9 11	Eclipſe Im. 18 43 Em. 20 57
13	9 5	Im. 15 59 Eclipſe
14	8 58	Im. 13 14 Em. 15 28
15	8 52	Im. 10 30 Eclipſe
16	8 46	Im. 7 44 Em. 9 58
17	8 40	Im. 5 0 Eclipſe
18	8 34	Im. 2 14 Em. 4 29 Im. 23 30
19	8 28	Eclipſe Im. 20 45 Em. 22 59
20	8 22	Im. 18 1 Eclipſe
21	8 15	Im. 15 16 Em. 17 30
22	8 8	Im. 12 32 Eclipſe
23	8 2	Im. 9 47 Em. 12 1
24	7 55	Im. 7 3 Eclipſe
25	7 47	Im. 4 17 Em. 6 31
26	7 40	Im. 1 33 Eclipſe Im. 22 48
27	7 33	Em. 1 2 Im. 20 4 Eclipſe
28	7 27	Im. 17 18 Em. 19 32
Mar.		

March	Par:		H. M. H. M. H. M.
1	7	19	Im. 14 35 Eclipſe
2	7	11	Im. 11 49 Em. 14 3
3	7	3	Im. 9 6 Eclipſe
4	6	54	Im. 6 21 Em. 8 35
5	6	48	Im. 3 37 Eclipſe
6	6	43	Im. 0 51 Em 3 5 Im. 22 8
7	6	36	Eclipſe Im. 19 21 Em 21 36
8	6	28	Im. 16 39 Eclipſe
9	6	22	Im. 13 53 Em. 16 7
10	6	14	Im. 11 9 Eclipſe
11	6	6	Im. 8 24 Em. 10 38
12	5	57	Im. 5 41 Eclipſe.
13	5	49	Im. 2 55 Em. 5 9
14	5	41	Im. 0 11 Ecl. Im. 21 25 Em. 23
15	5	32	Im. 18 41 Eclipſe (39
16	5	24	Im. 15 56 Em. 18 10
17	5	16	Im. 13 14 Eclipſe
18	5	8	Im. 10 28 Em. 12 42
19	5	0	Im. 7 44 Eclipſe
20	4	52	Im. 4 59 Em. 7 13
21	4	44	Im. 2 16 Eclipſe Im. 23 30
22	4	36	Em. 1 44 Im. 20 47 Eclipſe
23	4	28	Im. 18 1 Em. 20 15.
24	4	19	Im. 15 18 Eclipſe
25	4	11	Im. 12 32 Em. 14 46
26	4	3	Im. 9 49 Eclipſe
27	3	55	Im. 7 3 Em. 9 17
28	3	48	Im. 4 20 Eclipſe
29	3	40	Im 1 34 Em. 3 48 Im. 22 51
30	3	32	Eclipſe Im. 20 5 Em. 22 19
31	3	24	Im. 17 21 Eclipſe
May			*Jupiter near the Sun.*
18	3	40	Eclipſe Em. 15 24
19	3	48	Im. 10 24 Em. 12 37
20	3	56	Eclipſe Em. 9 54
21	4	5	Im. 4 54 Em. 7 8
22	4	14	Eclipſe Em. 4 24 Im. 23 24
23	4	22	Em. 1 38 Eclipſe Em. 22 55
24	4	31	Im. 17 55 Em. 20 9
25	4	40	Eclipſe Em. 17 25
26	4	48	Im. 12 25 Em. 14 39
27	4	56	Eclipſe Em. 11 55
28	5	4	Im. 6 55 Em. 9 9
29	5	12	Eclipſe Em. 6 24
30	5	19	Im. 1 25 Em. 3 39 Eclipſe
31	5	27	Em. 0 54 Im. 19 55 Em. 22 9

June	Par.		H. M. H. M. H. M.
1	5	35	Eclipſe Em. 19 24
2	5	43	Im. 14 25 Em. 16 39
3	5	51	Eclipſe Em. 13 54
4	5	59	Im. 8 55 Em. 11 9
5	6	8	Eclipſe Em. 8 24
6	6	14	Im. 3 24 Em. 5 39 Eclipſe
7	6	23	Em. 2 54 Im. 21 54
8	6	30	Em. 0 8 Eclipſe Em. 21 24
9	6	38	Im. 16 24 Em. 18 38
10	6	45	Eclipſe Em. 15 53
11	6	52	Im. 10 53 Em. 13 8
12	6	59	Eclipſe Em. 10 23
13	7	6	Im. 5 22 Em. 7 37
14	7	13	Eclipſe Em. 4 53 Im. 23 53
15	7	20	Em. 2 7 Eclipſe Em. 23 23
16	7	27	Im. 18 23 Em. 20 37
17	7	34	Eclipſe Em. 16 52
18	7	42	Im 11 52 Em. 14 7
19	7	49	Eclipſe Em. 12 22
20	7	55	Im. 7 22 Em. 9 36
21	8	2	Eclipſe Em. 6 51
22	8	8	Im. 1 51 Em. 4 6 Eclipſe
23	8	15	Em. 1 21 Im. 20 21 Em. 22 35
24	8	21	Eclipſe Em. 19 51
25	8	28	Im. 14 51 Em. 17 5
26	8	34	Eclipſe Em. 14 20
27	8	40	Im. 9 20 Em. 11 34
28	8	46	Eclipſe Em. 8 50
29	8	52	Im. 3 50 Em. 6 4.
30	8	59	Eclipſe Em. 3 19 Im. 22 19
Jul.			
1	9	5	Em. 0 34 Eclipſe Em. 21 49
2	9	11	Im. 16 49 Em. 19 3
3	9	17	Eclipſe Em. 16 18
4	9	23	Im. 11 18 Em. 13 32
5	9	29	Eclipſe Em. 10 48
6	9	34	Im. 5 48 Em. 8 3
7	9	39	Eclipſe Em. 5 18 (23 47
8	9	44	Im. 0 18 Em. 2 32 Ecli. Em.
9	9	49	Im. 18 47 Em. 21 1
10	9	54	Eclipſe Em. 16 8
11	9	59	Im. 11 18 Em. 13 32
12	10	4	Eclipſe Em. 12 46
13	10	10	Im. 7 46 Em. 10 1
14	10	15	Eclipſe Em. 7 15
15	10	20	Im. 2 15 Em. 4 29 Eclipſe
16	10	24	Em. 1 45 Im. 20 45 Em. 22 59
17	10	28	Eclipſe Em. 20 14

	H. M.	H. M. H. M.
July	Par.	
18	10 31	Im. 15 14 Em. 17 28
19	10 35	Eclipſe Em. 14 43
20	10 39	Im. 9 43 Em. 11 58
21	10 43	Eclipſe Em. 9 12
22	10 47	Im. 4 12 Em. 6 27
23	10 51	Eclipſe Em. 3 42 Im. 22 42
24	10 54	Em. 0 56 Eclipſe Em. 22 11
25	10 57	Im. 17 11 Em. 19 25
26	11 0	Eclipſe Em. 16 40
27	11 4	Im. 11 46 Em. 13 55
28	11 7	Eclipſe Em. 11 10
29	11 10	Im. 6 10 Em. 8 24
30	11 13	Eclipſe Em. 5 39
31	11 15	Im. 0 39 Em. 2 54 Eclipſe
Aug.		
1	11 18	Em. 0 8 Im. 19 8 Em. 21 23
2	11 20	Eclipſe Em. 18 38
3	11 22	Im. 13 38 Em. 15 52
4	11 24	Eclipſe Em. 13 6
5	11 26	Im. 8 6 Em. 10 20
6	11 28	Eclipſe Em. 7 36.
7	11 30	Im. 2 36 Em. 4 51 Eclipſe
8	11 31	Em. 2 5 Im. 21 5 Em. 23 19
9	11 32	Eclipſe Em. 20 34
10	11 33	Im. 15 34 Em. 17 48
11	11 34	Eclipſe Em. 15 3
12	11 35	Im. 10 3 Em. 12 17
13	11 36	Eclipſe Em. 9 36
14	11 36	Im. 4 32 Em. 6 47
15	11 36	Eclipſe Em. 4 1 Im. 23 1
16	11 37	Em. 1 16 Eclipſe Em. 22 31
17	11 37	Im. 17 30 Em. 19 45
18	11 37	Eclipſe Em. 16 59
19	11 36	Im. 11 59 Em. 14 14
20	11 36	Eclipſe Em. 11 28
21	11 35	Im. 6 28 Em. 8 42
22	11 34	Eclipſe Em. 5 57
23	11 33	Im. 0 57 Em. 3 11 Eclipſe
24	11 32	Em. 0 26 Im. 19 26 Em. 21 40
25	11 31	Eclipſe Em. 18 55
26	11 29	Im. 13 54 Em. 16 9
27	11 27	Eclipſe Em. 13 23
28	11 25	Im. 8 23 Em. 10 37
29	11 23	Eclipſe Em. 7 52
30	11 21	Im. 2 52 Em. 5 6 Eclipſe
31	11 18	Em. 2 20 Im. 21 20 Em. 23 35

	H. M.	H. M. H. M.
Sept.	Par.	
1	11 16	Eclipſe Em. 20 49
2	11 13	Im. 15 49 Em. 18 4
3	11 10	Eclipſe Em. 15 17
4	11 6	Im. 10 17 Em. 12 32
5	11 3	Eclipſe Em. 9 46
6	10 59	Im. 4 45 Em. 7 0
7	10 55	Eclipſe Em. 4 14 Im. 23 14
8	10 50	Em. 1 28 Eclipſe Em. 22 42
9	10 46	Im. 17 42 Em. 19 57
10	10 42	Eclipſe Em. 17 10
11	10 38	Im. 12 10 Em. 14 25
12	10 34	Eclipſe Em. 11 39
13	10 29	Im. 6 38 Em. 8 53
14	10 24	Eclipſe Em. 6 7
15	10 18	Im. 1 6 Em. 3 21 Eclipſe
16	10 12	Em. 0 34 Im. 19 34 Em. 20 49
17	10 7	Eclipſe Em. 19 2
18	10 1	Im. 14 2 Em. 16 17
19	9 55	Eclipſe Em. 13 30
20	9 48	Im. 8 30 Em. 10 44
21	9 41	Eclipſe Em. 7 58
22	9 34	Im. 3 58 Em. 5 12 Eclipſe
23	9 27	Em. 2 25 Im. 21 25 Em. 23 40
24	9 20	Eclipſe Em. 20 53
25	9 13	Im. 50 52 Em. 18 7
26	9 5	Eclipſe Em. 15 21
27	8 57	Im. 10 20 Em. 12 35
28	8 49	Eclipſe Em. 9 47
29	8 42	Im. 4 47 Em. 7 2
30	8 33	Eclipſe Em. 4 15 Im. 23 14
Oct.		
1	8 25	Em. 1 29 Eclipſe Em. 22 42
2	8 16	Im. 17 42 Em. 19 56
3	8 5	Eclipſe Em. 17 9
4	7 56	Im. 12 8 Em. 14 23
5	7 47	Eclipſe Em. 11 36
6	7 38	Im. 6 35 Em. 8 50
7	7 29	Eclipſe Em. 6 4
8	7 19	Im. 1 3 Em. 3 18 Eclipſe
9	7 9	Em. 0 30 Im. 19 29 Em. 21 44
10	6 59	Eclipſe Em. 18 57
11	6 48	Im. 13 56 Em. 16 11
12	6 37	Eclipſe Em. 13 23
13	6 27	Im. 8 22 Em. 10 37
14	6 16	Eclipſe Em. 7 48
15	6 5	Im. 2 47 Em. 5 4 Eclipſe
16	5 54	Em. 2 16 Im. 21 16 Em. 23 31

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Octob.	Par. H. M.	H. M H. M H. M
17	5 42	*Eclipſe Em.* 20 42
18	5 30	*Im.* 15 41 *Em.* 17 56
19	5 18	*Eclipſe Em.* 15 8
20	5 6	*Im.* 10 7 *Em.* 12 22
21	4 54	*Eclipſe Em.* 9 34
22	4 42	*Im.* 4 33 *Em.* 6 48
23	4 30	*Eclipſe Em.* 4 0 *Im.* 22 59
24	4 17	*Em.* 1 14 *Eclipſe Em.* 22 27
25	4 4	*Im.* 17 26 *Em.* 19 41
26	3 51	*Eclipſe Em.* 16 52
27	3 38	*Im.* 11 51 *Em.* 14 6
28	3 25	*Eclipſe Em.* 11 18
29	3 12	*Im.* 6 17 *Em.* 8 32
30	3 0	*Eclipſe Em.* 5 43
31	2 49	*Im.* 0 42 *Em.* 2 58 *Eclipſe*

Nov.	Par. H. M.	H. M H. M H. M
1	2 36	*Em.* 0 10 *Im.* 19 9 *Em.* 21 24
2	2 23	*Eclipſe Em.* 18 36
3	2 10	*Im.* 13 35 *Em.* 15 50
4	1 57	*Eclipſe Em.* 13 1
5	1 43	*Im.* 8 1 *Em.* 10 15
6	1 30	*Eclipſe Em.* 7 26
7	1 17	*Im.* 2 25 *Em.* 4 41 *Eclipſe*
8	1 4	*Em.* 1 52 *Im.* 20 52 *Em.* 23 7
9	0 50	*Eclipſe Em.* 20 18
10	0 37	*Im.* 15 17 *Em.* 17 33
11	0 24	*Eclipſes.*
12	0 9	*Im.* 9 37 *Em.* 11 52
		Jupiter in Oppoſition to the Sun.
13	0 4	*Im.* 6 51 *Eclipſe*
14	0 17	*Im.* 4 6 *Em.* 6 21
15	0 30	*Im.* 1 18 *Eclipſe Im.* 22 33
16	0 44	*Em.* 0 48 *Im.* 19 44 *Eclipſe*
17	0 58	*Im.* 16 58 *Em.* 19 13
18	1 12	*Im.* 14 9 *Eclipſe*
19	1 26	*Im.* 11 23 *Em.* 13 38
20	1 39	*Im.* 8 34 *Eclipſe*
21	1 52	*Im.* 5 49 *Em.* 8 3
22	2 6	*Im.* 3 59 *Eclipſe* (*Eclipſe*
23	2 19	*Im.* 0 13 *Em.* 2 28 *Im.* 21 25
24	2 32	*Im.* 18 39 *Em.* 20 55
25	2 45	*Im.* 15 49 *Eclipſe*
26	2 57	*Im.* 13 4 *Em.* 15 19
27	3 9	*Im.* 10 15 *Eclipſe*
28	3 21	*Im.* 7 29 *Em.* 9 44
29	3 34	*Im.* 4 39 *Eclipſe*
30	3 48	*Im.* 1 54 *Em.* 4 9 *Im.* 23 5

1739.

Dec.	Par. H. M.	H. M. H. M. H. M.
1	4 0	*Eclipſe Im.* 20 20 *Em.* 22 35
2	4 12	*Im.* 17 31 *Eclipſe*
3	4 24	*Im.* 14 45 *Em.* 17 0
4	4 36	*Im.* 11 56 *Eclipſe*
5	4 48	*Im.* 9 11 *Em.* 11 26
6	5 1	*Im.* 6 22 *Eclipſe*
7	5 13	*Im.* 3 36 *Em.* 5 50
8	5 24	*Im.* 0 47 *Eclipſe Im.* 22 2
9	5 35	*Em.* 0 17 *Im.* 19 13 *Eclipſe*
10	5 46	*Im.* 16 27 *Em,* 18 42
11	5 57	*Im.* 13 38 *Eclipſe*
12	6 9	*Im.* 10 52 *Em.* 13 8
13	6 20	*Im.* 8 4 *Eclipſe*
14	6 31	*Im.* 5 18 *Em.* 7 33
15	6 41	*Im.* 2 29 *Eclipſe Im.* 23 44
16	6 51	*Em.* 1 59 *Im.* 20 55 *Eclipſe*
17	7 1	*Im.* 18 10 *Em.* 20 25
18	7 12	*Im.* 15 21 *Eclipſe*
19	7 22	*Im.* 12 35 *Em.* 14 51
20	7 31	*Im.* 9 48 *Eclipſe*
21	7 40	*Im.* 7 2 *Em.* 9 17
22	7 49	*Im.* 4 13 *Eclipſe*
23	7 58	*Im.* 1 28 *Em.* 3 43 *Im.* 22 40
24	8 7	*Eclipſe Im.* 19 54 *Em.* 22 10
25	8 15	*Im.* 17 6 *Eclipſe*
26	8 23	*Im.* 14 21 *Em.* 16 36
27	8 31	*Im.* 11 33 *Eclipſe*
28	8 39	*Im.* 8 47 *Em.* 11 2
29	8 47	*Im.* 5 59 *Eclipſe*
30	8 55	*Im.* 3 14 *Em.* 5 29 (*Em.* 23 56
31	9 3	*Im.* 0 26 *Eclipſe Im.* 21 40

1740.

Jan.	Par. H. M.	H. M. H. M. H. M.
1	9 10	*Im.* 18 52 *Eclipſe*
2	9 17	*Im.* 16 6 *Em.* 18 22
3	9 24	*Im.* 13 20 *Eclipſe*
4	9 31	*Im.* 10 35 *Em.* 12 50
5	9 38	*Im.* 7 47 *Eclipſe*
6	9 44	*Im.* 5 1 *Em.* 7 17
7	9 50	*Im.* 2 13 *Eclipſe Im.* 23 27
8	9 55	*Em.* 1 43 *Im.* 20 40
9	10 1	*Eclipſe Im.* 17 54 *Em.* 20 10
10	10 7	*Im.* 15 7 *Eclipſe*
11	10 11	*Im.* 12 22 *Em.* 14 38
12	10 16	*Im.* 9 35 *Eclipſe*
13	10 21	*Im.* 6 49 *Em.* 9 5
14	10 26	*Im.* 4 2 *Eclipſe*
15	10 30	*Im.* 1 16 *Em.* 3 32 *Im.* 22 30
16	10 34	*Eclipſe Im.* 19 44 *Em.* 22 0

Jan.	Par.		H. M. H. M. H. M.
17	10	38	*Im.* 16 58 *Eclipſe*
18	10	42	*Im.* 14 12 *Em.* 16 28
19	10	45	*Im.* 11 25 *Eclipſe*
20	10	48	*Im.* 8 40 *Em.* 10 56
21	10	51	*Im.* 5 54 Eclipſe
22	10	54	*Im.* 3 8 *Em.* 5 24 (*Em.* 23 52
23	10	57	*Im.* 0 22 Eclipſe *Im.* 21 36
24	11	0	*Im.* 18 50 Eclipſe
25	11	2	*Im.* 16 4 *Em.* 18 20
26	11	4	*Im.* 13 18 Eclipſe
27	11	6	*Im.* 10 33 *Em.* 12 49
28	11	8	*Im.* 7 47 Eclipſe.
29	11	10	*Im.* 5 1 *Em.* 7 17
30	11	12	*Im.* 2 15 Eclipſe, *Im.* 23 30
31	11	13	*Em.* 1 46 *Im.* 20 44 Eclipſe
Feb.			
1	11	13	*Im.* 17 58 *Em.* 20 14
2	11	14	*Im.* 15 13 Eclipſe
3	11	14	*Im.* 12 27 *Em.* 14 43
4	11	15	*Im.* 9 42 Eclipſe
5	11	15	*Im.* 6 56 *Em.* 9 12
6	11	15	*Im*, 4 10 Eclipſe
7	11	15	*Im.* 1 25 *Em.* 3 41 *Im.* 22 40
8	11	15	Eclipſe *Im.* 19 54 *Em.* 22 10
9	11	14	*Im.* 17 9 Eclipſe
10	11	14	*Im.* 14 23 *Em.* 16 39
11	11	13	*Im.* 11 38 Eclipſe
12	11	13	*Im.* 8 52 *Em.* 11 8
13	11	12	*Im.* 6 7 Eclipſe
14	11	10	*Im.* 3 21 *Em.* 5 38
15	11	8	*Im.* 0 37 Eclipſe *Im.* 21 51
16	11	6	*Em.* 0 7 *Im.* 19 6 Eclipſe
17	11	5	*Im.* 16 20 *Em.* 18 37
18	11	3	*Im.* 13 35 Eclipſe
19	11	1	*Im.* 10 50 *Em.* 13 7
20	10	59	*Im.* 8 5 Eclipſe
21	10	56	Im. 5 20 Em. 7 36
22	10	54	Im. 2 35 Eclipſe Im. 23 50
23	10	52	Em. 2 6 Im. 21 5
24	10	50	Eclipſe Im. 18 19 Em. 20 35
25	10	47	Im. 15 36 Eclipſe
26	10	44	Im. 12 49 Em. 15 6
27	10	40	Im. 10 5 Eclipſe
28	10	37	Im. 7 19 Em. 9 36
29	10	34	Im. 4 36 Eclipſe

Mar.	Par.		H. M. H. M. H. M.
1	10	30	Im. 1 50 Em. 4 6 Im. 23 5
2	10	26	Eclipſe Im. 20 20 Em. 22 36
3	10	22	Im. 17 36 Eclipſe
4	10	18	Im. 14 50 Em. 17 6
5	10	14	Im. 12 6 Eclipſe
6	10	10	Im. 9 20 Em. 11 37
7	10	6	Im. 6 36 Eclipſe
8	10	1	Im. 3 50 Em. 6 6
9	9	56	Im. 1 6 Eclipſe Im. 22 21
10	9	51	Em. 0 37 Im. 19 37 Eclipſe
11	9	47	Im. 16 51 Em. 19 8
12	9	43	Im. 14 7 Eclipſe
13	9	38	Im. 11 21 Em. 13 38
14	9	33	Im. 8 37 Eclipſe
15	9	28	Im. 5 52 Em. 8 8
16	9	22	Im. 3 8 Eclipſe
17	9	17	Im. 0 22 Em. 2 39 Im. 21 38
18	9	11	Eclipſe Im. 18 53 Em. 21 9
19	9	6	Im. 16 9 Eclipſe
20	9	0	Im. 13 23 Em. 15 40
21	8	54	Im. 10 40 Eclipſe
22	8	48	Im. 7 54 Em. 10 10
23	8	42	Im. 5 10 Eclipſe
24	8	37	Im. 2 25 Em 4 41 Im. 23 41
25	8	31	Eclipſe Im. 20 59 Em. 23 12
26	8	25	Im. 18 12 Eclipſe
27	8	18	Im. 15 26 Em. 17 43
28	8	12	Im. 12 42 Eclipſe
29	8	6	Im 9 56 Em. 12 13
30	7	59	Im. 7 13 Eclipſe
31	7	53	Im. 4 27 Em. 6 44
Apr.			
1	7	46	Im. 1 44 Eclipſe Im. 22 59
2	7	39	*Em.* 1 15 Im 20 14 *Eclipſe*
3	7	32	Im. 17 28 *Em.* 19 45
4	7	25	Im. 14 45 *Eclipſe*
5	7	18	Im. 11 59 *Em.* 14 16
6	7	12	Im. 9 15 *Eclipſe*
7	7	5	Im. 6 30 *Em.* 8 46
8	6	58	Im. 3 46 *Eclipſe*
9	6	51	Im. 1 0 *Em.* 3 17 Im. 22 17
10	6	44	*Eclipſe* Im. 19 31 *Em.* 21 48
11	6	37	Im. 16 47 *Eclipſe*
12	6	30	Im. 14 2 *Em.* 16 19
13	6	23	Im. 11 18 *Eclipſe*
14	6	15	Im. 8 32 *Em.* 10 40

Apr	.Par.		H. M. H. M. H. M.
15	6	8	Im. 5 48 Eclipſe
16	6	0	Im. 3 3 Em. 5 20
17	5	52	Im. 0 19 Eclipſe Im. 21 33 Em.
18	5	45	Im. 18 50 Eclipſe (23 50
19	5	37	Im. 16 4 Em. 18 21
20	5	29	Im. 13 21 Eclipſe
21	5	21	Im. 10 35 Em. 12 52
22	5	13	Im. 7 51 Eclipſe
23	5	5	Im. 5 5 Em. 7 22
24	4	57	Im. 2 22 Eclipſe Im. 23 36
25	4	49	Em. 1 53 Im. 20 52 Eclipſe
26	4	40	Im. 18 7 Em. 20 24
27	4	31	Im. 15 23 Eclipſe
28	4	22	Im. 12 37 Em. 14 54
29	4	13	Im. 9 54 Eclipſe
30	4	7	Im. 7 8 Em. 9 25
May.			
1	3	58	Im. 4 24 Eclipſe
2	3	48	Im. 1 39 Em. 3 56 Im. 22 56
3	3	38	Eclipſe Im. 20 9 Em. 22 26
4	3	29	Im. 17 25 Eclipſe
5	3	22	Im. 14 40 Em. 16 57
6	3	16	Im. 11 56 Eclipſe
7	3	7	Im. 9 10 Em. 11 27
8	2	58	Im. 6 26 Eclipſe
June			Jupiter near the Sun
18	2	53	Em. 2 17 Im. 21 13 Em. 23 3
19	3	1	Eclipſe Em. 20 48
20	3	9	Im. 15 44 Em. 18 2
21	3	17	Eclipſe Em. 15 17
22	3	25	Im. 10 13 Em. 12 31
23	3	33	Eclipſe Em. 9 46
24	3	41	Im. 4 43 Em. 7 1
25	3	49	Eclipſe Em. 4 17 Im. 23 13
26	3	57	Em. 1 31 Eclipſe Em. 22 47
27	4	5	Im. 17 43 Em. 20 1
28	4	13	Eclipſe Em. 17 17
29	4	21	Im. 12 13 Em. 14 31
30	4	30	Eclipſe Em. 11 46
July.			
1	4	38	Im. 6 42 Em. 9 1
2	4	46	Eclipſe Em. 6 16
3	4	54	Im. 1 12 Em. 3 31 Eclipſe
4	5	2	Em. 0 46 Im. 19 42 Em. 22 1

July	Par.		H. M. H. M. H. M.
5	5	10	Eclipſe Em. 19 16
6	5	18	Im. 14 13 Em. 16 31
7	5	26	Eclipſe Em. 13 47
8	5	34	Im. 8 43 Em. 11 1
9	5	42	Eclipſe Em. 8 17
10	5	50	Im. 3 13 Em. 5 31 Eclipſe
11	5	57	Em. 2 47 Im. 21 43
12	6	4	Em. 0 1 Eclipſe Em. 21 17
13	6	12	Im. 16 13 Em. 18 31
14	6	19	Eclipſe Em. 15 47
15	6	27	Im. 10 43 Em. 13 1
16	6	34	Eclipſe Em. 10 17
17	6	40	Im. 5 13 Em. 7 32
18	6	47	Eclipſe Em. 4 47 Im. 23 43
19	6	54	Em. 2 1 Eclipſe Em. 23 17
20	7	1	Im. 18 13 Em. 20 31
21	7	8	Eclipſe Em. 17 47
22	7	15	Im. 12 43 Em. 15 2
23	7	22	Eclipſe Em. 12 17
24	7	29	Im. 7 13 Em. 9 52
25	7	36	Eclipſe Em. 6 47
26	7	44	Im. 1 43 Em. 4 2 Eclipſe
27	7	52	Em. 1 18 Im. 20 14 Em. 22 32
28	8	0	Eclipſe Em. 19 48
29	8	6	Im. 14 44 Em. 17 2
30	8	12	Eclipſe Em. 14 18
31	8	18	Im. 9 14 Em. 11 32
Aug.			
1	8	24	Eclipſe Em. 8 48
2	8	29	Im. 3 43 Em. 6 2
3	8	34	Eclipſe Em. 3 18 Im. 22 14
4	8	39	Em. 0 32 Eclipſe Em. 21 47
5	8	45	Im. 16 43 Em. 19 2
6	8	50	Eclipſe Em. 16 17
7	8	55	Im. 11 13 Em 13 32
8	9	0	Eclipſe Em. 10 47
9	9	6	Im. 5 43 Em. 8 2
10	9	12	Eclipſe Em. 5 17
11	9	18	Im. 0 13 Em. 2 32 Ecli. Em.
12	9	23	Im. 18 43 Em. 21 2 (23 47
13	9	28	Eclipſe Em. 18 18
14	9	33	Im. 13 13 Em. 15 32
15	9	38	Eclipſe Em. 13 17
16	9	43	Im. 8 43 Em. 11 1
17	9	48	Eclipſe Em. 7 18
18	9	52	Im. 2 13 Em. 4 32 Eclipſe
19	9	56	Em. 1 48 Im. 20 43 Em. 23 2

Aug.	Par. H. M.	H. M. H. M. H. M.
20	10 0	Eclipſe Em. 20 17
21	10 4	Im. 15 13 Em. 17 32
22	10 8	Eclipſe Em. 14 47
23	10 12	Im. 9 43 Em. 12 1
24	10 16	Eclipſe Em. 9 17
25	10 20	Im. 4 12 Em. 6 31
26	10 24	Eclipſe Em. 3 47 Im. 22 42
27	10 28	Em. 1 1 Eclipſe Em. 22 16
28	10 32	Im. 17 12 Em. 19 31
29	10 36	Eclipſe Em. 16 46
30	10 39	Im. 11 42 Em. 14 1
31	10 42	Eclipſe Em. 11 16
Sept.		
1	10 45	Im. 6 11 Em. 8 30
2	10 47	Eclipſe Em. 5 45
3	10 50	Im. 0 41 Em. 3 0 Eclipſe
4	10 52	Em. 0 11 Im. 19 5 Em. 21 29
5	10 54	Eclipſe Em. 18 40
6	10 57	Im. 13 36 Em. 15 59
7	10 59	Eclipſe Em. 13 14
8	11 2	Im. 8 9 Em. 10 28
9	11 4	Eclipſe Em. 7 43
10	11 5	Im. 2 39 Em. 4 58 Eclipſe
11	11 6	Em. 2 13 Im. 21 8 Em. 23 27
12	11 7	Eclipſe Em. 20 42
13	11 8	Im. 15 37 Em. 17 56
14	11 9	Eclipſe Em. 15 11
15	11 10	Im. 10 6 Em. 12 25
16	11 11	Eclipſe Em. 9 44
17	11 12	Im. 4 35 Em. 6 55
18	11 12	Eclipſe Em. 4 9 Im. 23 5
19	11 13	Em. 1 24 Eclipſe Em. 22 38
20	11 13	Im 17 34 Em. 19 53
21	11 13	Eclipſe Em. 17 7
22	11 12	Im. 12 2 Em. 14 22
23	11 11	Eclipſe Em. 11 36
24	11 11	Im. 6 31 Em. 8 50
25	11 10	Eclipſe Em. 6 5
26	11 9	Im. 1 0 Em. 3 20 Eclipſe
27	11 8	Em. 0 34 Im. 19 29 Em. 21 48
28	11 7	Eclipſe Em. 19 2
29	11 6	Im. 13 57 Em. 16 16
30	11 4	Eclipſe Em. 13 31
Oct.		
1	11 2	Im. 8 26 Em. 10 45
2	11 0	Eclipſe Em. 7 59

Octob.	Par. H. M.	H. M. H. M. H. M.
3	10 57	Im. 2 54 Em. 5 13 Eclipſe
4	10 55	Em. 2 27 Im. 21 22 Em 23 42
5	10 53	Eclipſe Em. 20 56
6	10 50	Im. 15 51 Em. 18 10
7	10 47	Eclipſe Em. 15 24
8	10 44	Im. 10 19 Em. 12 38
9	10 40	Eclipſe Em. 9 52
10	10 36	Im. 4 47 Em. 7 6
11	10 32	Eclipſe Em. 4 19 Im. 23 14
12	10 29	Em 1 34 Eclipſe Em. 22 47
13	10 25	Im. 17 42 Em. 20 2
14	10 21	Eclipſe Em 17 15
15	10 16	Im. 12 10 Em. 14 29
16	10 11	Eclipſe Em. 11 43
17	10 6	Im. 6 38 Em. 8 57
18	10 1	Eclipſe Em. 6 10
19	9 56	Im. 1 5 Em. 3 25 Eclipſe
20	9 50	Em. 0 38 Im. 19 32 Em. 21 52
21	9 44	Eclipſe Em. 19 5
22	9 38	Im. 14 0 Em. 16 19
23	9 31	Eclipſe Em. 13 32
24	9 26	Im. 8 26 Em. 10 46
25	9 20	Eclipſe Em. 7 59
26	9 14	Im. 2 53 Em. 5 13 Eclipſe
27	9 6	Em. 2 26 Im. 21 20 Em. 23 40
28	8 58	Eclipſe Em. 20 53
29	8 50	Im. 15 47 Em. 18 7
30	8 43	Eclipſe Em. 15 19
31	8 37	Im. 10 14 Em. 12 34
Nov.		
1	8 29	Eclipſe Em. 8 46
2	8 20	Im. 3 41 Em. 6 0
3	8 12	Eclipſe Em 4 12 Im. 23 7
4	8 4	Em. 1 27 Eclipſe Em. 22 39
5	7 55	Im. 17 33 Em. 19 53
6	7 45	Eclipſe Em. 17 5
7	7 36	Im. 12 59 Em. 14 19
8	7 26	Eclipſe Em. 11 30
9	7 16	Im. 6 25 Em. 8 44
10	7 6	Eclipſe Em. 5 57
11	6 58	Im. 0 51 Em. 3 12 Eclipſe
12	6 49	Em. 0 23 Im. 19 18 Em. 21 38
13	6 39	Eclipſe Em. 18 49
14	6 29	Im. 13 43 Em. 16 3
15	6 18	Eclipſe Em. 13 50
16	6 7	Im. 8 9 Em. 10 29
17	5 56	Eclipſe Em. 7 40

Nov.	Par.		H. M. H, M. H M.
18	5	45	Im. 2 35 Em. 4 55 Eclipſe
19	5	33	Em. 2 6 Im. 21 0 Em. 23 20
20	5	21	Eclipſe Em. 20 31
21	5	9	Im. 15 25 Em. 17 45
22	4	57	Eclipſe Em. 14 57
23	4	47	Im. 9 51 Em. 12 11
24	4	37	Eclipſe Em. 9 23
25	4	25	Im. 4 17 Em. 6 37
26	4	13	Eclipſe Em. 3 47 Im. 22 42
27	4	1	Em. 1 2 Eclipſe Em. 22 13
28	3	47	Im. 17 7 Em. 19 27
29	3	35	Eclipſe Em. 16 38
30	3	24	Im. 11 32 Em. 13 52
Dec.			
1	3	11	Eclipſe Em. 11 3
2	2	58	Im. 5 57 Em. 8 18
3	2	45	Eclipſe Em. 5 28 (Em. 23 53
4	2	32	Im. 0 23 Em. 2 43 Eclipſe
5	2	20	Im. 18 47 Em. 21 7
6	2	8	Eclipſe Em 18 18
7	1	56	Im. 13 13 Em. 15 33
8	1	42	Eclipſe *Em.* 12 43
9	1	30	Im. 7 37 *Em.* 9 57

Dec.	Par.		H. M. H· M. H. M.
10	1	17	Eclipſe *Em.* 7 8
11	1	4	*Im.* 2 2 *Em.* 4 22 *Eclipſe*
12	0	19	*Em.* 1 33 *Im.* 20 27 *Em.* 22 47
13	0	37	*Eclipſe Em.* 19 58
14	0	24	*Im.* 14 52 *Em.* 17 13
15	0	10	*Eclipſe Em.* 14 23
			Jupiter in Oppoſition to the Sun.
16	0	3	*Im.* 9 17 *Em.* 11 38
17	0	16	*Im.* 6 28 Eclipſe
18	0	29	*Im.* 3 42 *Em.* 6 2
19	0	43	*Im.* 1 52 Eclipſe *Im.* 22 7
20	0	57	*Em.* 0 27 *Im.* 19 19 Eclipſe
21	1	12	*Im.* 16 34 *Em.* 18 54
22	1	24	*Im.* 13 43 Eclipſe.
23	1	36	*Im.* 10 57 *Em.* 13 17
24	1	47	*Im.* 8 8 Eclipſe
25	2	1	*Im.* 5 22 *Em.* 7 42
26	2	12	*Im.* 2 33 Eclipſe *Im* 23 47
27	2	22	*Em.* 2 8 *Im.* 20 59 Eclipſe
28	2	33	*Im.* 18 13 *Em.* 20 34
29	2	48	*Im.* 15 25 Eclipſe
30	3	2	*Im.* 12 39 *Em.* 14 59
31	3	15	*Im.* 8 50 Eclipſe

A TABLE of the *Conjunctions* of Jupiter's Four Planets with one another, for every Day of the Years 1739, 1740; while Jupiter is viſible.

G.R. III

1739.

Jan.	
1	d. d. h. m.
2	2 & 3 : 14 12 ! 1 & 2 :
3	(21 5
4	2 & 4 : 8 59
5	2 & 3 : 10 32
6	1 & 2 : 8 26
7	1 & 2 : 15 41
8	1 & 3 : 9 33
9	
10	
11	1 & 3 : 11 52
12	1 & 3 : 10 0
13	1 & 2 : 10 44
14	
15	1 & 3 : 12 21
16	
17	
18	
19	1 & 3 : 13 34
20	1 & 2 : 13 5
21	2 & 4 : 18 39
22	2 & 3 : 8 2 ! 1 & 3 15 10
23	
24	
25	1 & 2 : 9 20
26	1 & 3 : 16 55
27	1 & 2 : 15 26
28	
29	2 & 3 : 11 29
30	1 & 4 : 14 53
31	
Feb.	
1	1 & 2 : 11 23.
2	1 & 3 : 20 5
3	1 & 2 : 17 50
4	
5	2 & 3 : 15 0
6	
7	1 & 4 : 9 50
8	1 & 2 : 14 3

1739.

Feb.	
9	ſt. d.
10	1 & 2 : 20 13
11	
12	
13	
14	1 & 2 : 9 25 (12 33
15	1 & 2 : 16 27 ! 1 & 4 :
16	
17	2 & 3 : 7 36
18	
19	
20	
21	1 & 2 : 11 51
22	
23	2 & 4 : 10 18 : 1 & 4 : 15
24	(32
25	
26	1 & 2 : 8 6
27	
28	
Mar.	
1	
2	(20 30
3	2 & 3 : 14 49 ! 1 & 4
4	1 & 2 : 3 30 ! 2 & 4 : 3 23
5	1 & 2 : 10 36
6	1 & 3 : 9 30
7	
8	
9	
10	1 & 3 : 11 15
11	
12	1 & 2 : 13 3 (9 12
13	1 & 3 : 12 58 ! 2 & 3 :
14	2 & 3 : 10 56 ! 1 & 2 :
15	(19 7
16	1 & 2 : 2 18.
17	
18	1 & 2 : 8 22
19	

1739

Mar.	
	d. d.
20	2 & 3 : 13 0 (14 7
21	1 & 3 : 15 19 ! 2 & 4 :
22	(1 & 2 : 21 34
23	
24	1 & 3 : 17 14
25	1 & 2 : 10 44
26	1 & 2 : 18 6
27	
28	
29	1 & 4 : 7 56
30	2 & 4 : 7 12
31	1 & 2 : 17 8
May	
7	1 & 2 : 1 21
8	
9	
10	1 & 3 : 13 53
11	1 & 4 : 7 48
12	
13	1 & 3 : 15 40
14	1 & 2 : 3 45 ! 1 & 3 : 7 0
15	
16	
17	1 & 3 : 16 52
18	
19	1 & 4 : 10 50
20	1 & 3 : 19 50
21	1 & 3 : 6 32
22	
23	
24	1 & 2 : 19 17
25	
26	
27	
28	2 & 3 : 10 6
29	
30	
31	1 & 2 : 21 38

1739.

June
1
2
3
4 1 & 2 : 10 50 ! 1 & 4 :
5 (13 38 ! 2 & 3 17 23 !
6 (3 & 4 : 21 58
7
8
9
10 1 & 2 : 5 0
11 1 & 2 : 13 11
12 1 & 3 : 3 59
13
14 2 & 4 : 13 16
15
16
17 1 & 2 : 7 38
18 1 & 2 : 15 31 ! 2 & 3 :
19 1 & 3 : 7 2 (20 38
20
21
22 1 & 2 : 4 40 ! 1 & 3 :
23 (7 46
24 1 & 2 : 10 8
25 1 & 2 : 17 50
26 1 & 3 : 9 57.
27
28 (20 3
29 1 & 3 : 10 48 ! 2 4 :
30 1 & 4 : 5 33
July
2 1 & 2 : 20 10
3 1 & 3 : 12 53
4
5 (5 8
6 1 & 2 : 9 22 ! 1 & 3 : 13
7
8 1 & 4 : 9 15 ! 1 & 2 : 15 5
9 1 & 4 : 11 51 ! 1 & 2 :
(22 28
10 2 & 3 : 7 0 ! 1 & 3 : 15 47
11
12 1 & 2 : 4 23
13 1 & 2 : 11 39 ! 1 & 3 :
14 (17 19
15 1 & 2 : 17 30

1739.

July
16
17
18
19 1 & 2 : 6 42
20 1 & 2 : 13 55
21
22
23
24 2 & 3 : 13 50
25 1 & 4 : 18 10
26 1 & 2 : 9 6.
27 1 & 2 : 16 14
28
29 2 & 3 : 2 34
30
31 1 & 2 : 5 22
Aug
1 (20 43
2 1 & 2 : 11 23 ! 1 & 4 :
3 2 & 4 : 15 32 ! 1 & 2 :
4 (18 31
5 2 & 3 : 6 59
6 1 & 2 : 0 33
7 1 & 2 : 7 40
8 1 & 3 : 3 8
9 1 & 2 : 12 43
10 1 & 2 : 20 48
11
12 1 & 4 : 2 38 ! 1 & 3 : 5 5
(2 & 4 : 7 45 ! 2 & 3 :
13 1 & 2 : 2 52 (9 24
14 1 & 2 : 9 20
15 1 & 3 : 5 54
16 1 & 2 : 16 5
17 1 & 2 : 23 4
18 (9 56
19 1 & 3 : 8 0 ! 3 & 4 :
20 1 & 2 : 5 11 ! 1 & 4 :
21 1 & 2 : 12 13. (6 19
22 2 & 3 : 3 9 ! 1 & 3 : 8 42
23 1 & 2 : 18 18
24
25
26 2 & 3 : 16 3 (13 24
27 1 & 2 : 7 24 ! 2 & 4 :
28 1 & 4 : 8 43 ! 1 & 2 :
(14 28

1739.

Aug
29
30
31
Sept
1
2 1 & 3 : 13 33 ! 2 & 3 :
3 1 & 2 : 9 38 (19 14.
4 1 & 2 : 7 20
5 1 & 4 : 5 15 ! 2 & 3 :
6 (9 41
7
8
9 1 & 3 : 16 15 ! 2 & 3 :
10 1 & 2 : 11 50 (22 26
11 1 & 2 : 18 51
12 1 & 3 : 17 7
13 3 & 4 : 11 46 ! 1 & 4 :
(13 29 ! 2 & 4 : 21 35.
14 1 & 2 : 7 58
15
16 1 & 3 : 18 53.
17 1 & 2 : 14 0
18 1 & 2 : 21 4.
19 1 & 3 : 19 37
20 (18 5
21 1 & 2 : 3 4 ! 1 & 4 :
32 1 & 2 : 10 8 ! 1 & 4 :
23 1 & 3 : 21 27 (19 24
24 2 & 3 : 4 30
25 1 & 2 : 23 12.
26 1 & 3 ! 22 54 ! 2 & 3 :
27 (19 53.
28 1 & 2 : 5 9
29 1 & 2 : 12 14
30 1 & 4 : 21 48
Oct
1 2 & 4 : 5 40 ! 2 & 3 :
2 (7 32
3
4
5 1 & 2 : 7 13
6 1 & 2 : 14 21
7
8 2 & 3 : 10 19 ! 1 & 2 :
9 (20 17
10 1 & 2 : 3 25

E

1739.
Oct.
11
12 1&3:3 6!1&2:9 16
13
14
15 1 & 3: 4 44
16 2 & 4: 9 52
17 1 &2: 5 31 ! 1 & 4:
18 (11 18
19 1 & 3: 5 54! 1 & 2:
20 1 &2: 18 35 (11 18
21 2 & 3: 15 54
22
23
24 1 & 2: 8 30 (6 47
25 2 & 4: 0 30 !2 & 3:
26 1 &4: 4 46! 1&3: 8 42
27 1 & 2: 20 37
28
29 1 & 3: 9 35 !2 & 3:
30 1 & 2: 2 14 (18 39
31 1 & 2: 9 36
No.
1 (11 44 ! 1&2 15 39
2 3&4: 10 48 ! 1 & 3:
3 1&4: 8 43
4
5
6 1 & 2: 4 10
7 1 & 2: 11 38
8
9 1 & 3: 13 43
10
11 2 &4: 7 25 ! 1 & 4:
12 1 & 3: 14 15 (10 41
13
14 1 & 2: 13 38
15
16 1 & 3: 16 3 ! 1 & 2:
17 (19 4
18
19 1 &4: 12 13 ! 1 & 3:
20 1 & 2: 8 0 (15 57
21 1 & 2: 15 40
22
23 1 & 3: 18 22 ! 1 & 2:
24 (21 0
25

1739
Nov.
26 1 & 3: 18 50
27 1 & 4: 1 50 ! 2 & 3:
(5 10 ! 3 & 4: 9 3
28 1 & 2: 17 46 ! 2 & 4:
29 (13 43
30 1 & 3: 20 42 ! 1 & 2:
(22 54
Dec
1
2
3 1 & 3: 21 15 (11 51
4 2 & 3: 7 54 ! 1 & 2:
5 1 & 4: 15 50 ! 1 & 2:
6 (19 33
7
8
9
10
11 2 & 3: 10 38 ! 1 & 2:
12 (13 47
13 2 & 4: 17 25 ! 1 & 4:
14 (19 3
15 1 & 3: 1 24 ! 1 & 2:
16 (2 44
17
18 2 & 3: 13 22 ! 1 & 2:
19 (15 45
20
21 (3 49 ! 3 & 4: 7 54!
22 1 & 2: 3 22 ! 1 & 3:
(2 & 4: 8 40
23 1 & 2: 13 20
24
25 1 & 2: 17 44
26
27
28 (6 44
29 1 & 3: 6 16 ! 1 & 2:
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1 1 & 3: 7 55 ! 1 & 2
2 1 & 3: 5 34 (19 46
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4 (8 48
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17 (12 26
18 1 & 2: 4 5
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23 1 & 3: 15 30
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25 1 & 2: 6 49
26 1 & 3: 16 31
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30 1 & 3: 18 26
31
Feb. (13 43
1 1 & 2: 9 10 ! 2 & 4:
2 1 & 4: 14 8 ! 1 & 3:
3 (19 15
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6 2 & 3: 10 32
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8 1 & 2: 11 38
19 1 & 2: 19 36 ! 1 & 3:
10 (22 2
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13 1 & 2: 8 44
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15 1 & 2: 14 6
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17 (22 9
18 1 & 4: 19 12 ! 2 & 4:
19 1 & 2: 3 22
20 1 & 2: 11 2 ! 2 & 3:
21 1 & 3: 3 6 (17 11

Feb.
22 1 & 2 : 16 35
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26 1 & 2 : 5 50.
27 1 & 2 : 13 20 ! 2 & 3 :
28 1 & 3 : 6 0 (20 34
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Mar.
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4 1 & 2 : 8 18
5 1 & 2 : 15 41
6 1 & 3 : 8 54 ! 3 & 4 :
7 1 & 4 : 5 18 (14 3
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18 1 & 2 : 13 14 (16 10
19 1 & 2 : 20 27.
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22 1 & 2 : 2 29
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25 1 & 2 : 15 42
26 1 & 2 : 22 51
27 2 & 3 : 10 30 ! 1 & 3 :
28 (17 42
29 1 & 2 : 4 56
30 1 & 2 : 12 3 (18 8
31 1 & 4 : 15 1 ! 3 & 4 :
Apr.
1 1 & 4 : 17 50 ! 1 & 2 :
2 (18 10
3 2 & 3 : 14 6 ! 1 & 3 :
4 (20 42

Apr.
5 1 & 2 : 7 24
6 1 & 2 : 14 28
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9 1 & 4 : 20 34
10 3 & 4 : 11 54
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12 1 & 2 : 9 52
13 1 & 2 : 16 53
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15 2 & 3 : 6 48
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19 1 & 2 : 12 17
20 1 & 2 : 19 19
21 (10 25
22 1 & 3 : 5 28 ! 2 & 3 :
23 1 & 2 : 1 31
24 1 & 2 : 8 34
25 1 & 3 : 5 52 (14 41
26 2 & 4 : 10 37 ! 1 & 2 :
27 1 & 2 : 21 44
28 (14 0
29 1 & 3 : 8 5 ! 2 & 3 :
30 1 & 2 : 3 56
May
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2 1 & 3 : 9 3
3 1 & 2 : 17 7
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5 2 & 4 : 4 4 ! 1 & 2 :
6 2 & 4 : 11 6 ! 2 & 3 :
7 1 & 2 : 6 19 (17 39
8 1 & 2 : 13 28
9 2 & 3 : 8 22 ! 1 & 3 :
10 1 & 2 : 19 3 4 (12 31

June.
18 2 & 3 : 15 6 ! 1 & 2 :
19 1 & 3 : 16 7 (21 6
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21 (7 15
22 1 & 2 : 9 59 ! 1 & 3 :
23 2 & 3 : 14 51 ! 1 & 2 :
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June
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24 2 & 4 : 13 13 ! 1 & 4 :
25 1 & 3 : 8 6 ! 3 & 4 :
26 (4 24
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29 1 & 3 : 10 17.
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July
1 (22 12 ! 1 & 4 : 11 50
2 1 & 3 : 11 12 ! 2 & 3 :
3 1 & 4 : 14 13
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7	2 & 3 : 15 45
8	1 & 3 : 3 0
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13	1 & 2 : 7 15 ! 2 & 4 :
14	1 & 4 : 10 27 ! 3 & 4 :
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15	1 & 3 : 6 12
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24	1 & 3 : 5 54
25	1 & 2 : 6 58 ! 1 & 3 :
26	(9 52
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28	1 & 2 : 20 8
29	2 & 3 : 2 3 ! 1 & 3 :
30	1 & 4 : 15 47 (12 4
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1	1 & 2 : 9 16 ! 1 & 3 :
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3	1 & 2 : 14 53
4	1 & 2 : 22 24 (14 52
5	2 & 3 ; 5 56 ! 1 & 3 :
6	(19 0
7	1 & 2 ; 4 4 ! 1 & 4 :
8	1 & 2 : 11 34 ! 2 & 4 :
9	(11 47 ! 1 & 3 : 15
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14	1 & 2 : 6 27
15	1 & 2 : 13 50 ! 1 & 3 :
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26	1 & 2 ! 5 12 ! 2 & 3 :
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28	1 & 2 : 11 8
29	1 and 2 : 18 18
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3	1 and 4 : 6 9 ! 2 and 3 :
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5	1 and 2 : 13 23
6	1 and 2 : 20 30
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8	1 and 3 : 3 10 ! 2 and 3
9	1 and 2 : 2 32 (7 2
10	1 and 2 : 9 34
11	1 and 3 : 4 34 ! 1 and 4
12	(8 43
13	1 and 2 : 22 40
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15	1 and 3 : 6 12
16	1 and 2 : 4 40
17	1 and 2 : 11 45
18	1 and 3 : 7 10
19	1 and 4 : 12 58 ! 2 and 4 :
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20	1 and 4 : 14 40
21	(13 15
22	1 and 3 : 9 0 ! 2 and 3 :
23	1 and 2 : 6 50
24	1 and 2 : 13 50
25	2 and 3 : 3 37
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27	(20 55
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29	1 and 3 : 11 38 ! 2 and 3
30	1 and 2 : 8 24 (16 46
31	1 and 2 : 15 55.

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5	1 and 3 : 14 10 ! 2 and 3
6	2 and 4 : 1 23 ! 1 and 2 :
7	1 and 2 17 5 (10 56
8	2 and 3 : 9 26 ! 1 and
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11	1 and 2 : 6 58
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13	1 and 2 : 12 57 ! 1 and 4
14	2 and 4 : 16 58 ! 1 and
	(2 : 19 59
15	2 and 3 : 12 16 ! 1 and
	(3 : 17 10
16	2 and 4 : 16 50
17	1 and 2 : 2 0
18	1 and 2 : 8 56
19	1 and 3 19 1
20	1 and 2 : 14 56
21	1 and 2 : 21 58
22	2 and 3 : 15 4 ! 1 and 3 :
23	(19 38 ! 3 and 4 : 20 7
24	1 and 2 : 3 55
25	1 and 2 : 10 26
26	1 and 3 : 21 28
27	2 and 3 : 3 32
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Dec.	(5 50
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2	1 and 2 : 12 49
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4	2 and 3 : 6 12 ! 1 and
5	(2 : 18 50
6	2 and 3 : 20 30
7	(4 : 11 18
8	1 and 2 : 7 44 ! 2 and
9	1 and 4 : 6 0 ! 1 and 2
10	(14 47
11	1 and 3 : 1 48 ! 2 and
12	(3 : 8 45
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BRITISH MUSEUM

Dec.	1740	Dec.	1740	Dec.	1740
14		20	1 and 2 : 5 42	26	
15	1 and 2 : 9 38	21		27	1 and 2 : 7 36
16	1 and 2 16 42	22	1 and 2 : 11 34	28	
17	2 and 4 : 2 36 ! 3 and 4	23	1 and 2 : 18 39	29	1 and 3 : 6 55
	(18 32	24	(14 12	30	1 and 2 : 20 38
18	2 and 3 : 11 30	25	1 and 4 : 9 7 ! 2 and 3	31	
19					

ERRATA.

⁂ TABLE, 1ſt. of the 2d. Planet for *March*, 14 16 16 51, read 14 17 33 51, and for *June* 14 23 49 55, read 15 1 0 0.

OBSERVATIONS.

(1) THE original *Tables*, on which the preſent Calculations are founded, are thoſe of Mr. *Bradley*, Profeſſor of Aſtronomy at *Oxford*, printed 20 Years ago, but not yet publiſhed; as reduc'd to an eaſier Form by his Uncle Mr. *Pound*, by Dr. *Bevis*, and Mr. *Caleb Smith*. Only I always make uſe of thoſe exacter Tables for the *Equation of Light* which are exhibited above Page 66. 67. inſtead of thoſe more imperfect ones in uſe hitherto. Which Correction amounts ſometimes to no leſs than 1 Minute 13 Seconds, which, in Errors of 4 or 5 Minutes only, as are thoſe of the firſt Planet, is by no means an inconſiderable Correction.

(2) The *Meridian* to which theſe Tables and Calculations are all fitted, is that of the Royal Obſervatory at *Greenwich*; which hardly differs half a Minute from that of *London*, Eaſtward.

(3) The Time in theſe Tables is not *mean*, or *equal*; but *common* or *apparent* Time, as determined by a true Meridian, or Sun-Dial at Noon; or elſe by a good Watch, or Clock regulated thereto.

(4) The *Days* are here *Aſtronomical* and begin on the foregoing Days at Noon, and continue till the Noon of the Days over-againſt which the Numbers ſtand. Thus *Jan.* 2 Days, 7 Hours, 44 Minutes, and 40 Seconds, 1739. Means 7 Hours, 44 Minutes, and 40 Seconds compleat, after our 2d of *January* 1739, at Noon. And *December* 31 Days, 12 Hours, 30 Minutes, and 22 Seconds, 1739, denotes 12 Hours, 30 Minutes, 22 Seconds compleat,

pleat, after Noon, on our *December* 31, 1739, which we call 30 Minutes 22 Seconds after Midnight or in the Morning of the firſt of *January* 1740. And ſo in all other Inſtances whatſoever.

(5.) The *Eclipſes* of all the four Planets are ſet down in the firſt Table to Seconds, as being more exactly known than the *Occultations* in the Second, or *Conjunctions* in the 3d Table; while both theſe laſt are only ſet down to the neareſt whole Minutes: which is abundantly ſufficient at preſent for their Obſervation.

(6) In the *Occultations* of the firſt Planet, exhibited in the 2d Table, the Planet it ſelf, by Reaſon of its Diameter, meaſur'd by Mr. *Bradley*, a 24th Part of that of *Jupiter*, is not leſs than 5 Minutes 46 Seconds of Time during its *Immerging* into, and *Emerging* from the Body of *Jupiter*. Accordingly we are ſtill to allow the *Durations* of ſuch *Occultations* to be from the Entry and Exit of its *Center*, given in the Table, 2 Minutes 53 Seconds, or near 3 Minutes after it firſt, and before it laſt touches the Body: while in the *Eclipſes* of all theſe Planets, we ever eſtimate thoſe *Durations* to be only from their *laſt* Appearances at *Immerſions*, to their *firſt* Appearances at *Emerſions*. And note farther, that altho' the *Eclipſes* and *Conjunctions* of all the four Planets are ſet down in the firſt and third Tables, as being of good Uſe in Aſtronomy, yet are theſe *Occultations* in the *ſecond* Table confin'd to the *firſt* Planet only. Since too many Difficulties occur in calculating and obſerving the *Occultations* of the reſt to permit us to expect any conſiderable Advantage therefrom.

(7.) At the earneſt Deſire of Mr. *Lynn* I have, in a 3d Table added the mutual oppoſite *Conjunctions* of all the four Planets one with another, for theſe two Years, at any tolerable nearneſs to the Body of Jupiter, or where they can be of any conſiderable Uſe to us. See Page 35. 36. prius. For altho', on account of the preſent Imperfection of the Theories of the 3d and 4th. but chiefly of the 2d. theſe *Conjunctions*, ſo eaſily to be obſerved every where, cannot yet be uſeful for the Longitude at Sea; becauſe in that Caſe the *Obſervations*, how exact ſoever, can only be compared with imperfect *Calculations*; yet may they be very uſeful already for the ſame Diſcovery at *Land*; and particularly for ſetling the *Longitude* of the *Ports* and *Havens*: (which is the firſt Thing to be done in order to that Diſcovery at Sea:) while the *actual Obſervations* are ſtill to be compar'd with other *actual Obſervations* of the very ſame *Conjunctions* ſeen elſewhere. They may alſo be very uſeful for the Correction of the Theories of the three remoter Planets; and ſo for making all ſuch *Conjunctions* uſeful for the Diſcovery of the Longitude at Sea hereafter. Of which Matter ſee Page 22—26. prius.

(8.) The *Number* of the *Eclipſes* and *Occultations* ſet down in the 2d Table, every one belonging to the *firſt Planet*, and *every one uſeful for the Diſcovery of the Longitude at Sea already*, is 4 in 42 Hours and a half. Which, in theſe two Years, amount to no fewer than 1472. See Page 25. 26. and Page 94.—99 prius.

(9.) The *Number* of the *Eclipſes* of the other three Planets, ſet down in the firſt Table, is no fewer than 392 in the ſame time.

(10.) The *Number* of the *Conjunctions* in the 3d Table, during the ſame time, is no fewer than 506. The total Sum is 2370.

(11.) Since the *Eclipſes* of the 1ſt Planet, in the firſt Table, are more nicely to be found, both by Calculation and Obſervation, than its *Occultations*, in the ſecond, They are more carefully to be watched and obſerved, and depended on than the other. For as by theſe *Occultations*, how carefully ſoever obſerv'd, we can, at preſent, hardly pretend to come at the *Longitude at Sea* nearer than to 5 or 6 Minutes in time; ſo by theſe *Eclipſes* may

may we uſually come already within 3 or 4 Minutes. And when Mr. *Bradley* has made his Correction in the Numbers of the firſt of about another Minute, which he is prepared to do, we may expect thereby to come within 2 or 3 Minutes. To ſay nothing of Mr. *Machin*'s Hopes of diſcovering and correcting the Errors of all the ſecondary Planets ariſing from their mutual Influences upon each other, a *priori* alſo: which is indeed the only thing ſtill wanting in order to bring all their Theories to the utmoſt Perfection.

(12.) As it has appeared already from Mr. *Derham*'s Obſervations, mention'd Page 13 before, that the *Inclination* of the Plain of the 3d Planet is ſomewhat greater than theſe Tables ſuppoſe it to be; ſo does it appear from *Kirchius*'s Annotations on Monſieur *D'L'Iſles* Calculations of theſe *Eclipſes* for the laſt 5 Years, and made from Mr. *Bradley*'s Tables, that the Nodes of the 4th Planet are a few Degrees erroneous. And whereas all thoſe Nodes have been hitherto ſuppoſed to be in the ſame Place of the Heavens, which would afford *corporal Conjunctions* when *Jupiter* and his Planets were in thoſe Nodes; Mr. *Lynn* informs me, that, in his long Courſe of obſerving them, he could never find that veriſy'd; nor could ever ſee ſuch a *corporal Conjunction* of any two of them, in any ſuch Circumſtances whatſoever.

N. B. The *Parallax of the Orb* is ſet down here all along in the 2d Table, for the uſe of ſuch as have a mind themſelves to examine the *Heliocentrick* Phænomena of theſe Planets, and reduce them to their *Geocentrick*. Which Reduction entirely depends on the Allowance for that *Parallax*. See Page 28. — 31. prius.

N. B. The *Eclipſes* of the 4th Planet were of neceſſity to be here omitted, till Midſummer 1740. becauſe that Planet paſſes wide of *Jupiter*'s Shadow till that time.

(13.) Since Dr. *Smith*'s admirable Book of Opticks is now publiſh'd; and Mr. *Mac-Laurin* therein aſſures us, Remarks Page 80. 81. That Mr. *Short* of *Edinburgh* has not only ſo much improv'd the Method of grinding Metalline Specula, as thereby to enable very ſharp Eyes, in a very clear Sky to diſcern all *Saturn*'s Planets with a focal Length of fifteen Inches only; but has render'd the grinding of *Glaſſes* for ſuch reflecting Teleſcopes very practicable alſo; I cannot but be highly pleaſed with the mighty Improvement hereby afforded to this my reflecting Teleſcope. For as Mr. *Scarlet*, ſeveral Years ago, fail'd in grinding me ſuch a Glaſs Speculum; and ſo forced me, utterly againſt my own Inclinations, to have recourſe to Mr. *Hearne*'s Metalline Reflecter, in this Deſign; ſo do I now very gladly return to my firſt Intentions. I now hope to procure, from Mr. *Short*, ſuch *Glaſs Reflecters* as will be much cheaper; much lighter; and, by conſequence, more eaſily managable at Sea, than thoſe of Metal; and ſuch as, above all, will never ruſt or tarniſh in any Place whatſoever. This I look upon as the utmoſt Improvement this Teleſcope for the Sea is capable of: and what, I hope, will render the Obſervations to be there made by it very eaſy, very accurate, and very acceptable to all Aſtronomers and Navigators. How ſuch Obſervations are to be made; and how the Calculations therefrom are to be manag'd, in order to the Diſcovery of the Longitude, has been already explained at large, Page 94. — 101. prius, and need not be here repeated.

N. B. The correct Meaſures for the reflecting Teleſcope I, at length, pitch upon are theſe. The *focal Length* of the larger Reflecter is to be 5 Feet, or 60 Inches; and, by conſequence, the *length of the Tube* no more than two Feet and a half, or 30 Inches. The Breadth or *Diameter* of the Reflecter is to be 5 Inches. The Breadth or *Diameter* of its *Back Aperture*, and of its *Eye-Glaſs*, is to be 1 Inch and an half. The *Charge*, or focal Length
of

of the Eye-Glaſs, is to be about one Inch. Its ſmaller Reflecter is to be a flat Circle, very little more in Breadth or Diameter than the Back Aperture, or than one Inch and an half. This larger Reflecter is to be truly centred, and the ſmaller accurately adjuſted and kept parallel thereto. The Teleſcope will then take in about 5 Diameters of the Moon, or 6 Diameters of the Orbit of *Jupiter*'s remoteſt Planet at once; and will magnify Objects about 60 times in Diameter. If the larger Reflecter be ground intirely ſpherical, or even a little parabolical; and that very near to the Edges, as Mr. *Short* is able to do; the Image will be very diſtinct; and the ſmaller Reflecter will intercept little or nothing more than th eleventh part of the Light that would otherwiſe fall on the larger: which i but little more than our common reflecting Teleſcopes intercept already. See Dr. *Smith*'s Opticks, Page 148, and Remarks Page 80. 81. 104. 105. When Mr. *Short* has procur'd himſelf as good an *Apparatus* of Tools for this focal Length of 5 Feet, as he has already for 9 and 15 Inches, he will, I believe, be able to furniſh me and the Seamen with ſuch reflecting Teleſcopes, as will, with great Eaſe, ſhew all thoſe *Eclipſes*, *Occultations*, and *Conjunctions* of *Jupiter*'s Planets, which are neceſſary for the Diſcovery of the Longitude at Sea.

Lyndon, Rutland,
March 12,
1738-9

Will. Whiſton.

of the Eye-Glaſs, is to be about one Inch. Its ſmaller Reflecter is to be a flat Circle, very little more in Breadth or Diameter than the Back Aperture, or than one Inch and an half. This larger Reflecter is to be truly centred, and the ſmaller accurately adjuſted and kept parallel thereto. The Teleſcope will then take in about 3 Diameters of the Moon, or 6 Diameters of the Orbit of *Jupiter*'s remoteſt Planet at once; and will magnify Objects about 60 times in Diameter. If the larger Reflecter be ground intirely ſpherical, or even a little parabolical; and that very near to the Edges, as Mr. *Short* is able to do; the Image will be very diſtinct; and the ſmaller Reflecter will intercept little or nothing more than the eleventh part of the Light that would otherwiſe fall on the larger: which is but little more than our common reflecting Teleſcopes intercept already. See Dr. *Smith*'s Opticks, Page 148, and Remarks Page 80. 81. 104. 105. When Mr. *Short* has procur'd himſelf as good an *Apparatus* of Tools for this focal Length of 5 Feet, as he has already for 9 and 15 Inches, he will, I believe, be able to furniſh me and the Seamen with ſuch reflecting Teleſcopes, as will, with great Eaſe, ſhew all thoſe *Eclipſes*, *Occultations*, and *Conjunctions* of *Jupiter*'s Planets, which are neceſſary for the Diſcovery of the Longitude at Sea.

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March 12,
1738-9.

Will. Whiſton.